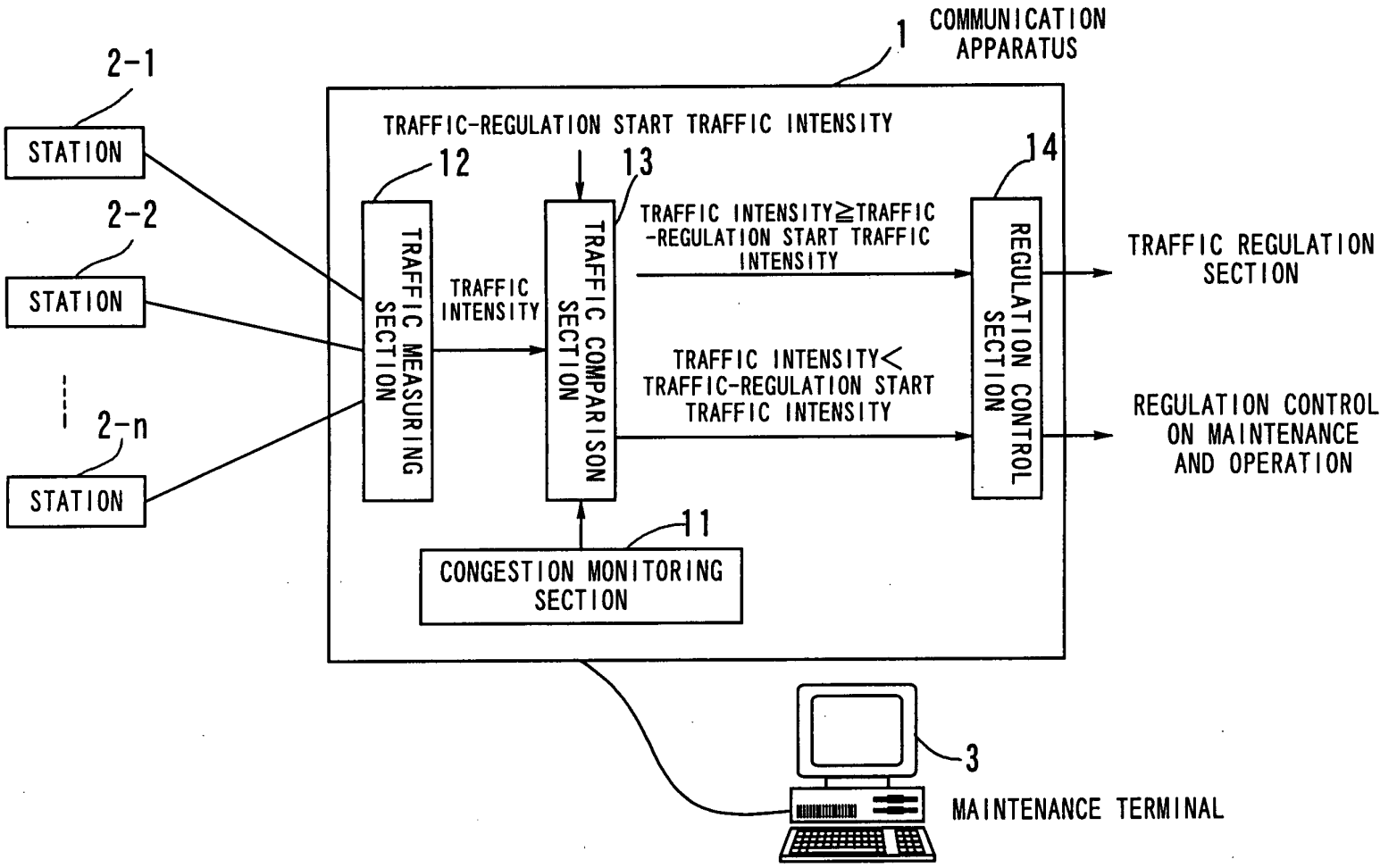
1
COMMUNICATION APPARATUS
2-1
STATION
2-2
STATION
2-n
STATION
TRAFFIC-REGULATION START TRAFFIC INTENSITY
12
13
14
TRAFFIC MEASURING SECTION
TRAFFIC INTENSITY
TRAFFIC COMPARISON SECTION
TRAFFIC INTENSITY≧TRAFFIC -REGULATION START TRAFFIC INTENSITY
TRAFFIC INTENSITY< TRAFFIC-REGULATION START TRAFFIC INTENSITY
REGULATION CONTROL SECTION
TRAFFIC REGULATION SECTION
REGULATION CONTROL ON MAINTENANCE AND OPERATION
11
CONGESTION MONITORING SECTION
3
MAINTENANCE TERMINAL

FIG. 1

T1 CC-DUTY-CYCLE AND CONGESTION-LEVEL SETTING TABLE

CC OCCUPANCY RATE	CC-OCCUPANCY RATE ASSOCIATED CONGESTION LEVELS
CC 60%	LEVEL 1
CC 70%	LEVEL 2
CC 80%	LEVEL 3
CC 90%	LEVEL 4

FIG. 2

T2

RESPONSE-TIME AND CONGESTION-LEVEL SETTING TABLE

RESPONSE TIME	RESPONSE-TIME ASSOCIATED CONGESTION LEVELS
5 sec	LEVEL 1
7 sec	LEVEL 2
9 sec	LEVEL 3
15 sec	LEVEL 4

FIG. 3

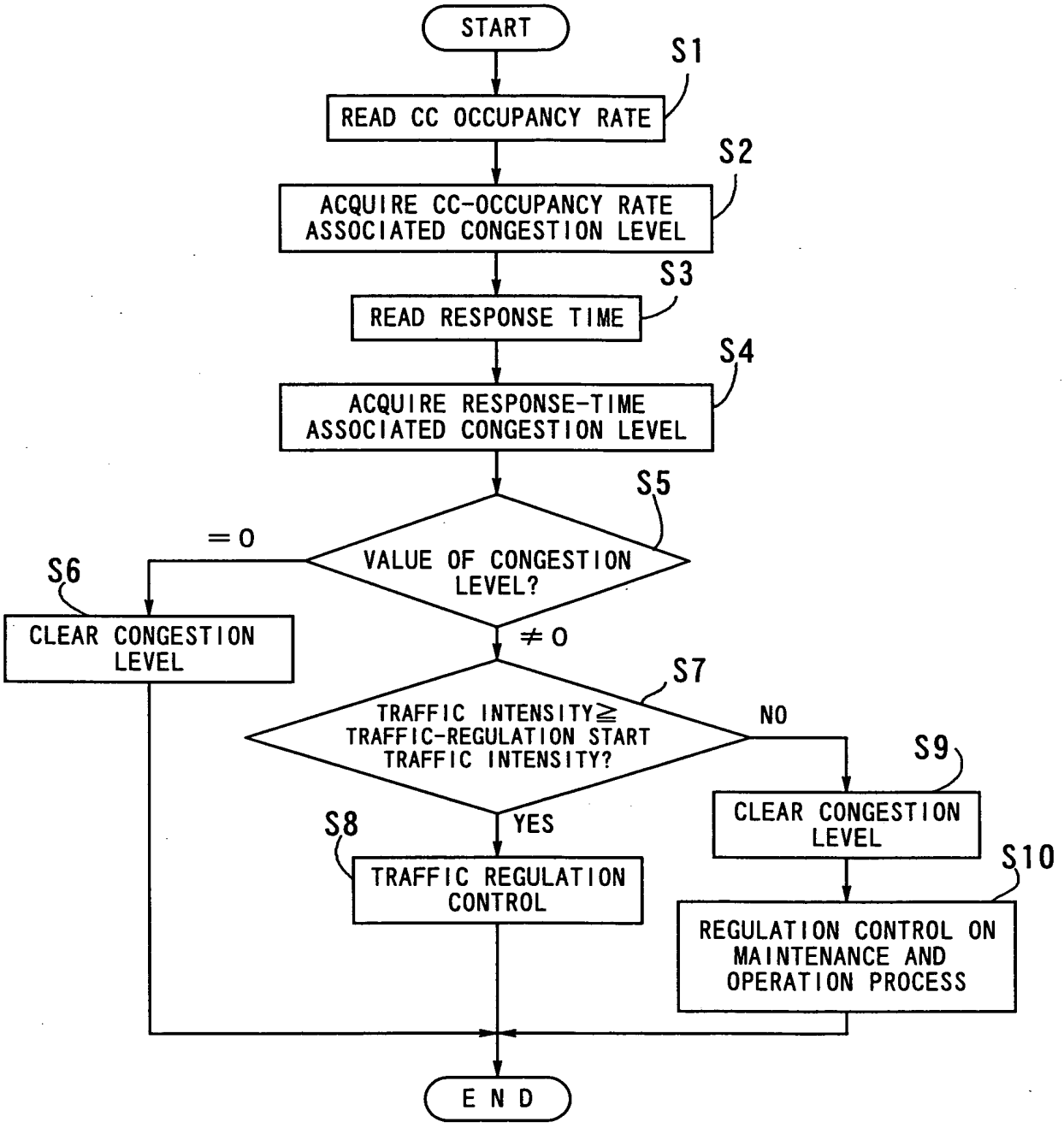
START
S1
READ CC OCCUPANCY RATE
S2
ACQUIRE CC-OCCUPANCY RATE ASSOCIATED CONGESTION LEVEL
S3
READ RESPONSE TIME
S4
ACQUIRE RESPONSE-TIME ASSOCIATED CONGESTION LEVEL
S5
VALUE OF CONGESTION LEVEL?
= 0
S6
CLEAR CONGESTION LEVEL
≠ 0
S7
TRAFFIC INTENSITY≧ TRAFFIC-REGULATION START TRAFFIC INTENSITY?
NO
S9
CLEAR CONGESTION LEVEL
YES
S8
TRAFFIC REGULATION CONTROL
S10
REGULATION CONTROL ON MAINTENANCE AND OPERATION PROCESS
E N D

FIG. 4

T3 NUMBER-OF-REGULATION-TARGET TABLE

CONGESTION LEVEL	NUMBER OF STATIONS TO BE REGULATED
1	25
2	50
3	75
4	100

FIG. 5

T4 REGULATION PATTERN SELECTION TABLE

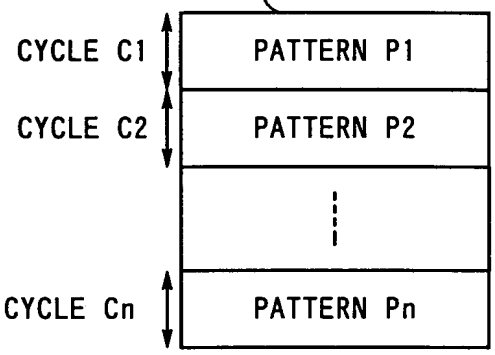

FIG. 6

T5 ORDER-OF REGULATION -TARGETS TABLE

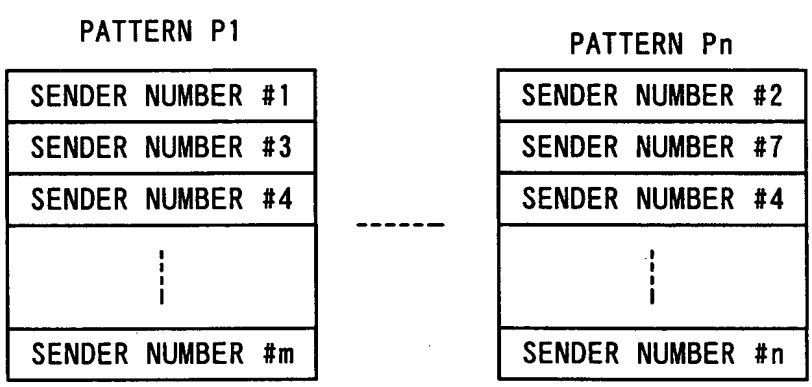

FIG. 7

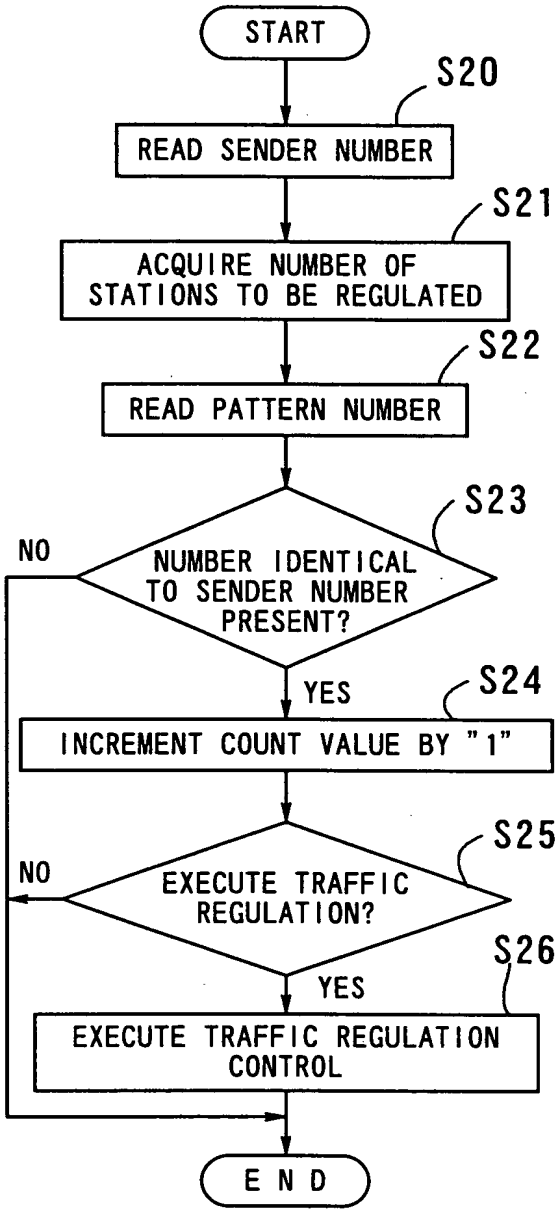
START
S20
READ SENDER NUMBER
S21
ACQUIRE NUMBER OF STATIONS TO BE REGULATED
S22
READ PATTERN NUMBER
S23
NUMBER IDENTICAL TO SENDER NUMBER PRESENT?
NO
YES
S24
INCREMENT COUNT VALUE BY "1"
S25
EXECUTE TRAFFIC REGULATION?
NO
YES
S26
EXECUTE TRAFFIC REGULATION CONTROL
END

FIG. 8

REGULATION RATIO	25%				50%				75%				100%			
QUOTIENT OF COUNT VALUE÷4	≦250				250～500				501～750				≧751			
REMAINDER OF COUNTER VALUE÷4	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
TRAFFIC REGULATION	○	○	○	×	○	×	○	×	○	×	×	×	×	×	×	×

○ : NO REGULATION

× : REGULATION

FIG. 9

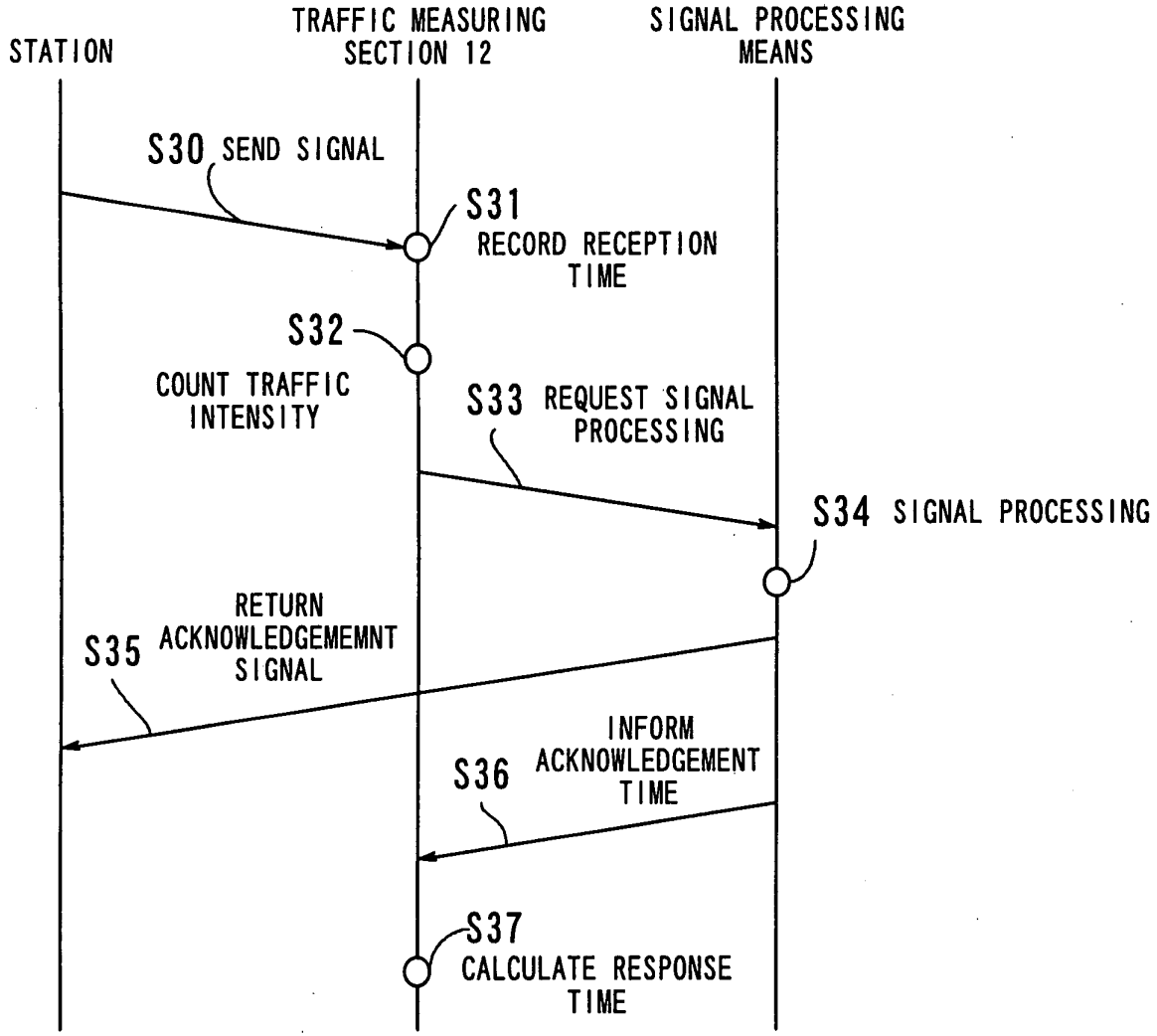
STATION
TRAFFIC MEASURING SECTION 12
SIGNAL PROCESSING MEANS
S30 SEND SIGNAL
S31 RECORD RECEPTION TIME
S32 COUNT TRAFFIC INTENSITY
S33 REQUEST SIGNAL PROCESSING
S34 SIGNAL PROCESSING
S35 RETURN ACKNOWLEDGEMEMNT SIGNAL
S36 INFORM ACKNOWLEDGEMENT TIME
S37 CALCULATE RESPONSE TIME

FIG. 10

JP 2002-232460

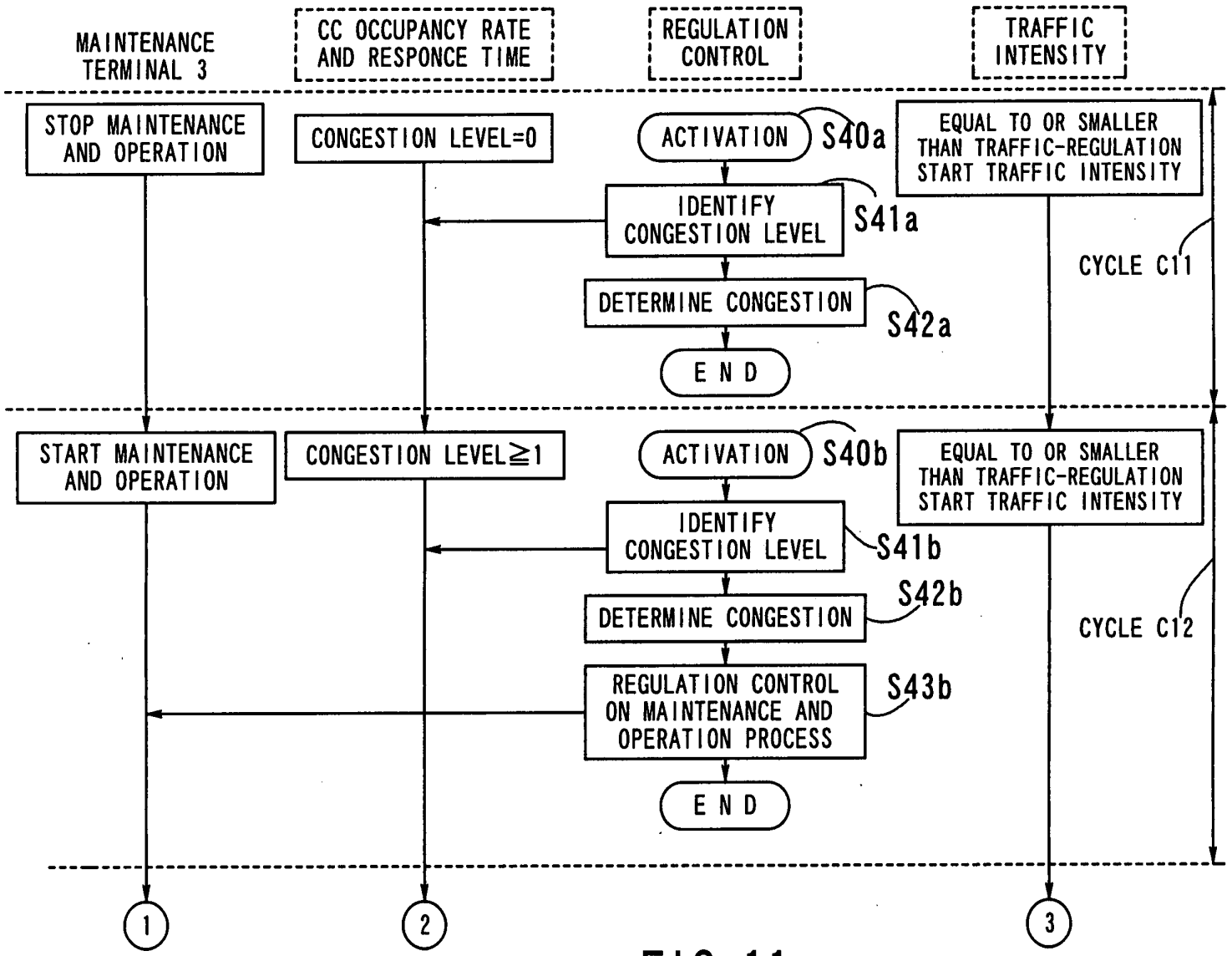

FIG. 11

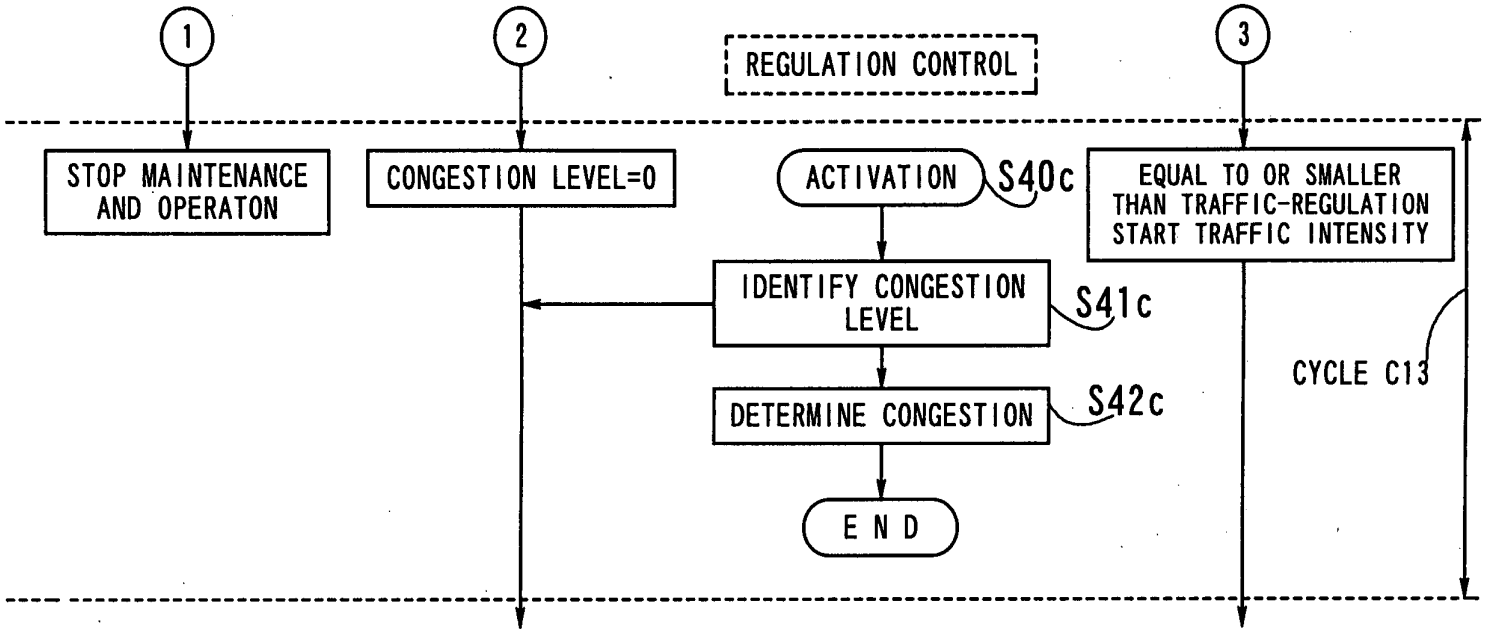
1
2
3
REGULATION CONTROL
STOP MAINTENANCE AND OPERATON
CONGESTION LEVEL=0
ACTIVATION
S40c
EQUAL TO OR SMALLER THAN TRAFFIC-REGULATION START TRAFFIC INTENSITY
IDENTIFY CONGESTION LEVEL
S41c
DETERMINE CONGESTION
S42c
CYCLE C13
E N D

FIG. 12

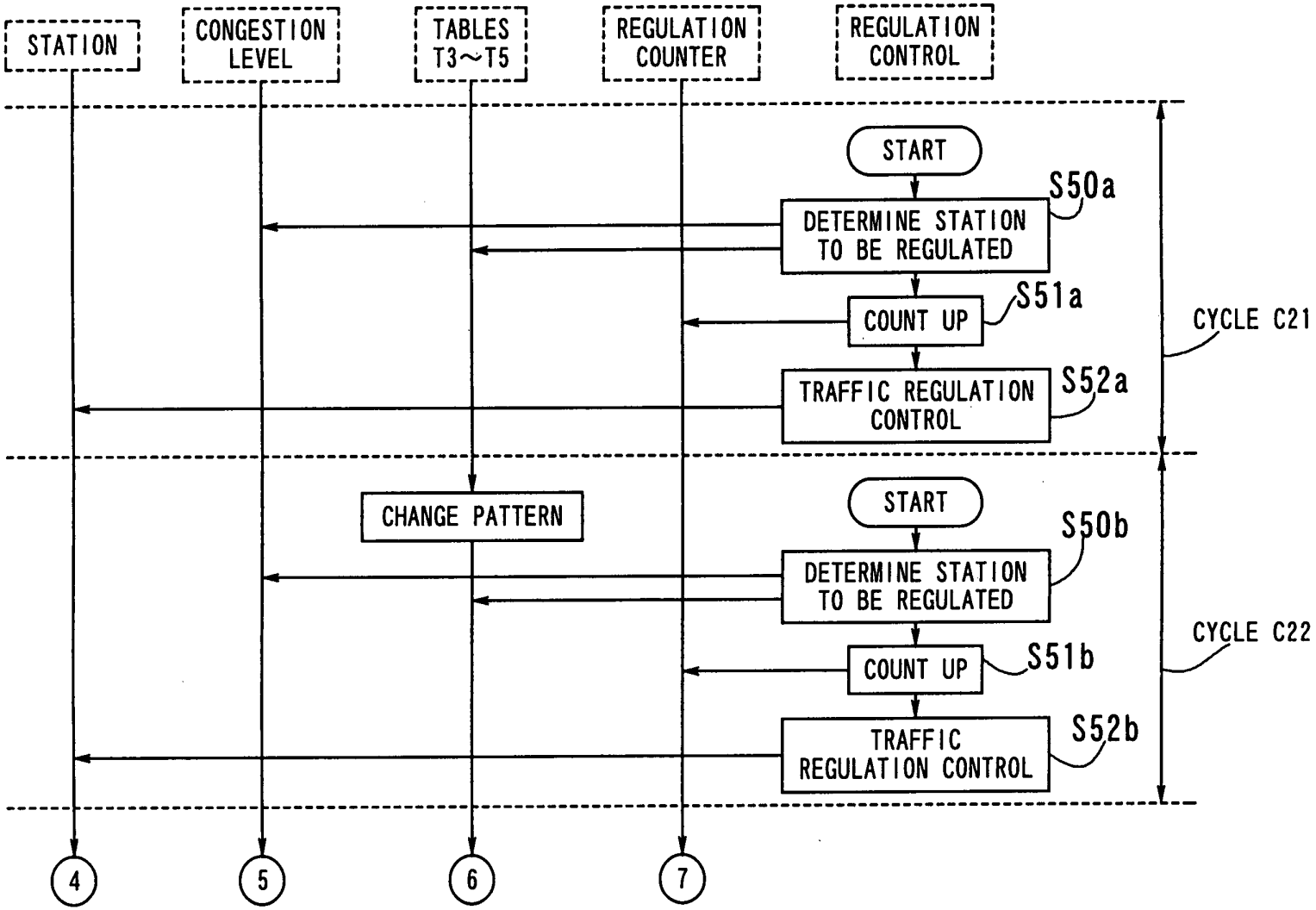
STATION
CONGESTION LEVEL
TABLES T3~T5
REGULATION COUNTER
REGULATION CONTROL
START
S50a
DETERMINE STATION TO BE REGULATED
COUNT UP
S51a
TRAFFIC REGULATION CONTROL
S52a
CYCLE C21
CHANGE PATTERN
START
S50b
DETERMINE STATION TO BE REGULATED
COUNT UP
S51b
TRAFFIC REGULATION CONTROL
S52b
CYCLE C22
4
5
6
7

FIG. 13

JOINED GEEZ60

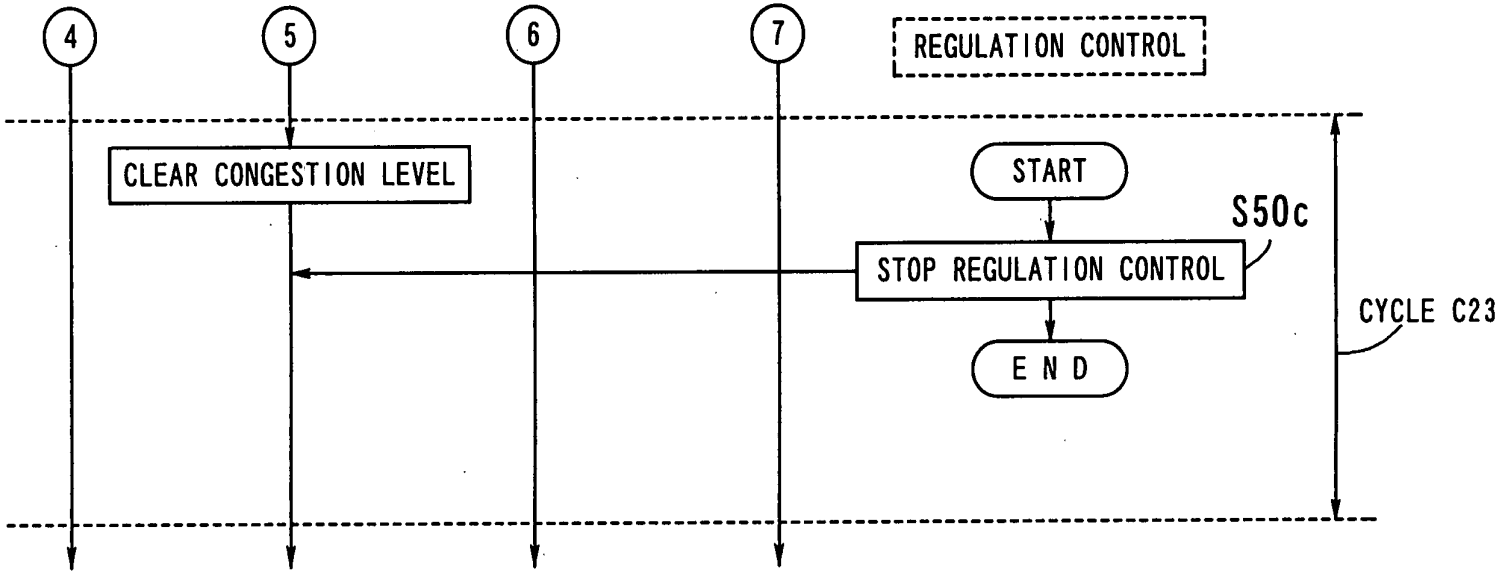

FIG. 14

EUROPEAN PATENT OFFICE

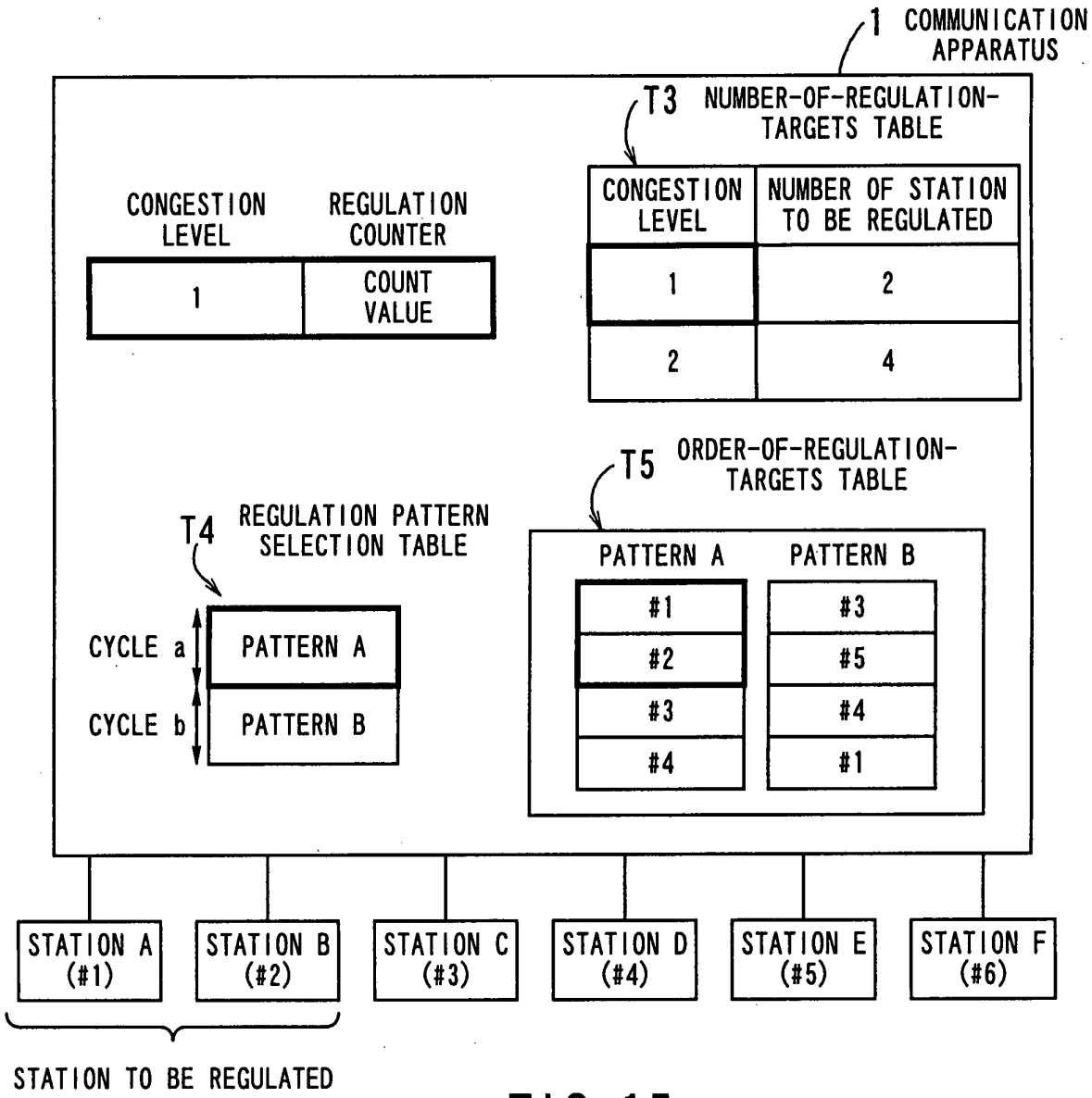

FIG. 15

EUROPEAN PATENT OFFICE

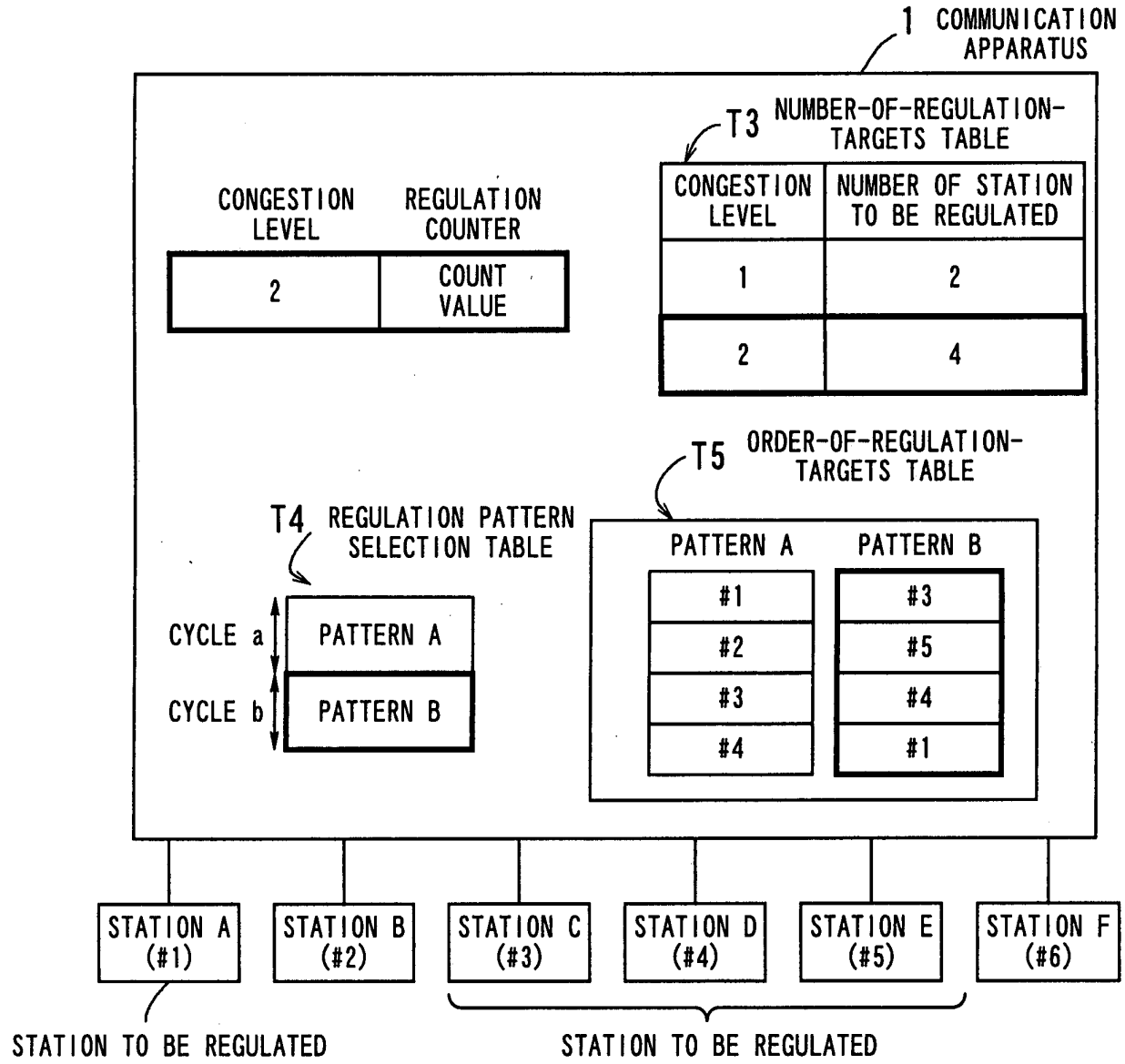

FIG. 16

JP 2000-022760

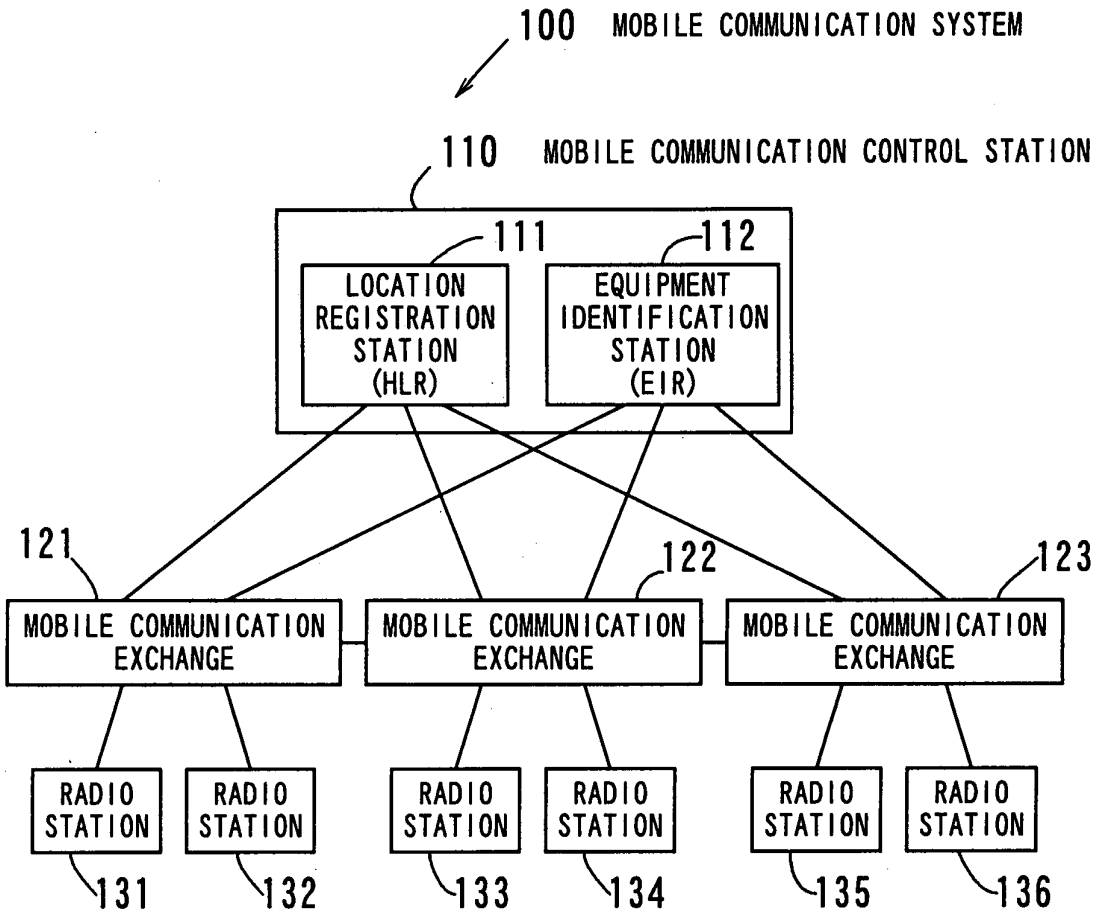

FIG. 17

EP 0 666 546 A2

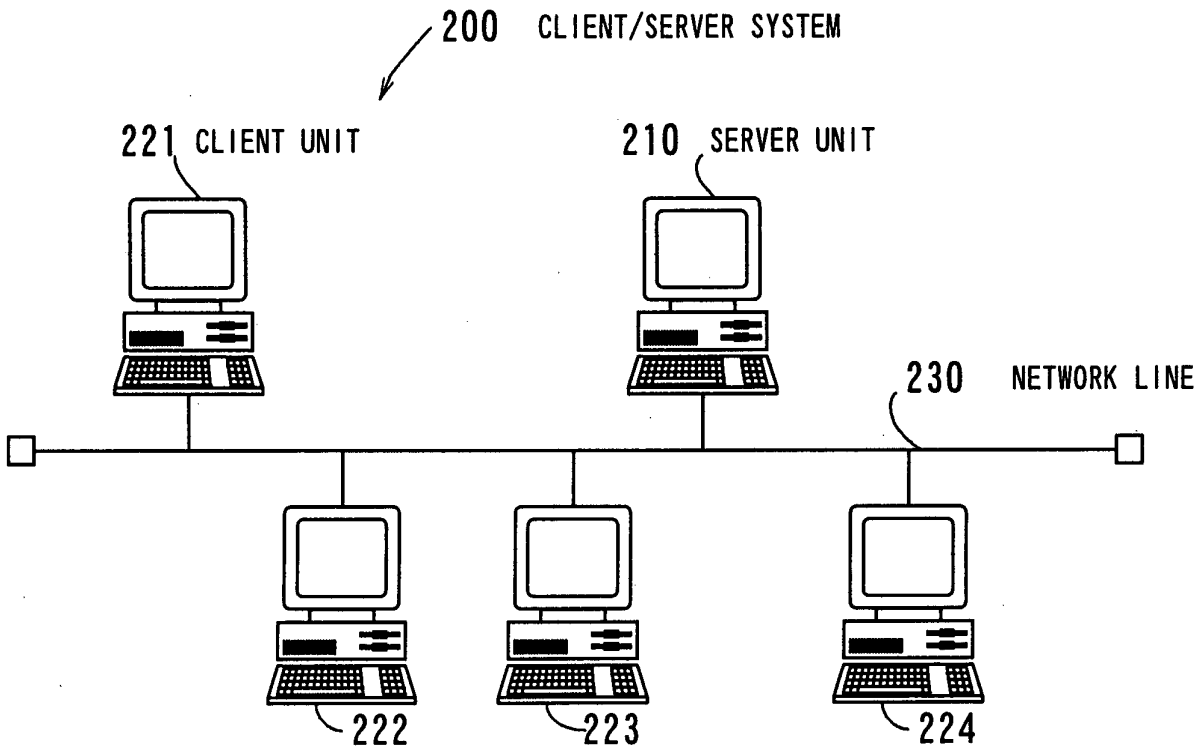

FIG. 18

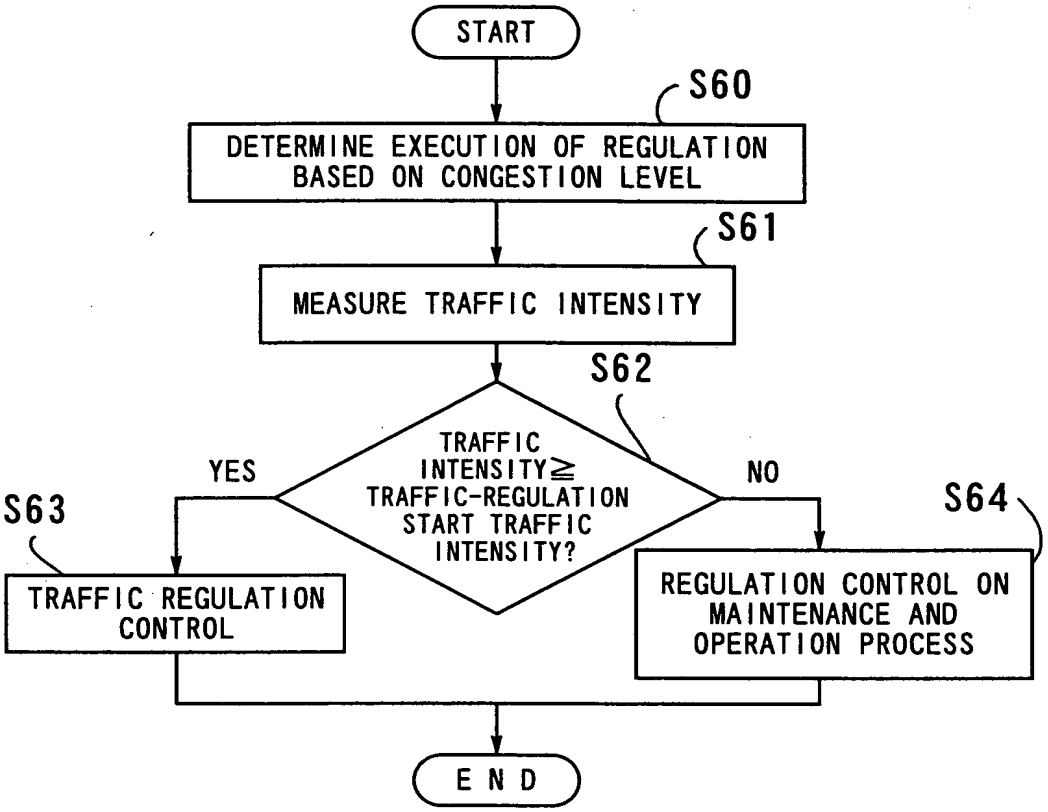
START
S60
DETERMINE EXECUTION OF REGULATION BASED ON CONGESTION LEVEL
S61
MEASURE TRAFFIC INTENSITY
S62
TRAFFIC INTENSITY≧ TRAFFIC-REGULATION START TRAFFIC INTENSITY?
YES
NO
S63
TRAFFIC REGULATION CONTROL
S64
REGULATION CONTROL ON MAINTENANCE AND OPERATION PROCESS
END

FIG. 19